NOTES FROM THE BOTANIC GARDENS, SYDNEY.

No. 5.

By J. H. Maiden and E. Betche.

DILLENIACEÆ.

Hibbertia stricta, R.Br., var. pedunculata, var.nov.

Perfectly glabrous, with creeping and rooting stems. Flowers on pedicels attaining 6 lines in length. Stamens rarely more than 4, the filaments united. Carpels quite glabrous.

Wingello (J. L. Boorman, November, 1899).

This well marked variety approaches Bentham's variety *leiocarpa*, with which it has in common the procumbent habit and the glabrous carpels, but it is distinguished by the rooting stems and the long peduncles, which do not exceed 3 lines in any other of the numerous varieties of *H. stricta*.

CRUCIFERÆ.

Lepidium ruderale, Linn., var. spinescens, Benth.

Narrabri (J. H. Maiden, November, 1899).

The spinescent form is only recorded from South Australia in the *Flora Australiensis*.

RUTACEÆ.

Eriostemon trachyphyllus, F.v.M.

Badgery's Crossing to Nowra (W. Forsyth & A. A. Hamilton, September, 1899); near Botany Bay, Sydney (J. L. Boorman, October, 1899).

The most northern locality previously recorded is Braidwood. In the Nowra specimens the flowers are frequently in clusters of three in the leaf-axils.

GEIJERA PARVIFLORA, Lindl.

Page River, Scone district; also Hunter River, 4 miles easterly (J. H. Maiden, August, 1899). Most eastern localities recorded.

SAPINDACEÆ.

HETERODENDRON OLEÆFOLIUM, Desf.

Page River, Scone district (J. H. Maiden, August, 1899). Most eastern locality recorded.

DODONÆA ADENOPHORA, Miq.

A West Australian plant erroneously included in the Flora of New South Wales. The western *D. adenophora*, Miq., and the eastern *D. tenuifolia*, Lindl., are very similar in habit, and were united by Benthan in the *Flora Australiensis*. Mueller separated them again on account of the dissepiment of the fruits, which are deciduous in *D. adenophora* and persistent in *D. tenuifolia*, but included both in the Flora of New South Wales. In a recent critical examination of the New South Wales species of *Dodonæa* we found abundant material from many New South Wales localities of *D. tenuifolia*, but not a single specimen of *D. adenophora*, and suspecting a mistake in Mueller's "Second Census of Australian Plants," we asked Mr. Luehmann whether he had any East Australian specimens of the true *D. adenophora*. Mr. Luehmann replied that *D. adenophora* is in the Melbourne Herbarium confined to West Australia, and that Mueller had himself noticed the mistake and had intended to correct it in his third Census, which death prevented him from publishing.

LEGUMINOSÆ.

DAVIESIA RECURVATA, Maiden & R. T. Baker.

Warrumbungle Ranges (W. Forsyth, October, 1899). Previously recorded only from Taloobie, 25 miles north of Rylstone, and from Never Never, 24 miles east of Rylstone.

Swainsona Cadelli, F.v.M. (ined).

Warrumbungle Ranges (W. Forsyth, October, 1899).

We take this opportunity of offering a few words of explanation in regard to the naming of this apparently very local plant.

Flowering specimens were first collected in 1883 by E. Betche in the Warrumbungle Ranges, near Coonabarabran, and sent to Mueller for naming. About 6 years later Mrs. Cadell sent a bunch of cut flowers (without leaves) from Gulargambone to Mr. Charles Moore, then Director of the Gardens, which contained the same *Swainsona*. These flowers were again sent to Mueller, and his attention was drawn to the fact that they were identical with the undescribed species from Coonabarabran formerly sent to him. Mueller named the plant provisionally in a private letter *S. Cadelli*, but never wrote, or at all events published, a description. The first description was published in 1893 in the *Handbook of the Flora of New South Wales* (Moore & Betche), and though the fruits have not been collected, all other characters agree so completely with Bentham's section A of the genus, that it has been placed next to *S. galegifolia*, from which it is readily distinguished by its subulate calyx-tube and large floral bracts.

Acacia rubida, A. Cunn.

Several of the phyllodineous *Acacias* long retain their pinnate seedling leaves, but in no species is this habit more prominent than in *A. rubida*, where the pinnate leaves at the base of the stem seem to be scarcely ever absent, even in full grown plants.

Acacia salicina, Lindl.

Page River, Scone district (J. H. Maiden, August, 1899). Most easterly locality recorded.

Acacia jonesii, F.v.M. and Maiden.

Wingello. Previously only recorded from Goulburn district, near Barber's Creek.

Acacia harpophylla, F.v.M.

Ripe pods recently sent by Mr. J. Gregson from Warrah, Willow Tree, enable us to complete the description of this species in the *Flora Australiensis*. Pods rather thick but flattened, with thickened margins, about 2 lines broad and usually $1\frac{1}{2}$ to $2\frac{1}{2}$ inches long, often curved and somewhat restricted between the seeds. Seeds comparatively large, brown, not shining, placed longitudinally; funicle very small for the genus, only slightly folded.

MYRTACEÆ.

Verticordia darwinioides, Maiden and Betche.

(P.L.S.N.S.W., 1898, p. 17). Synonymous with *Rylstonea cernua*, R. T. Baker, *Ibid.*, 1898, p. 767.

After a careful comparison of a specimen of *Rylstonea* (description published in November, 1898), kindly supplied by Mr. Baker, with our *Verticordia darwinioides* (published in March, 1898) we have arrived at the conclusion that they are identical, but the material from which our diagnosis was drawn was taken from an abnormal, starved plant found on the outskirts of the geographical range of the species, while Mr. Baker gathered his complete material in what appears to be the true home of this rare plant.

Following are extracts from Mr. Baker's and our own papers:—

Verticordia darwinioides.	Rylstonea cernua.
Leaves about 2 lines long, obtuse, but with a fine oblique point; floral leaves completely resembling the stem leaves.	*Leaves* 4 to 6 lines long, with a recurved point, the floral ones almost of equal length.
Flowers usually in pairs on a common slender peduncle, 1 to about 2 lines in length.	*Flowers* pedicellate in pairs, borne on a common peduncle; peduncle filiform, 4 to 6 lines long, nodding.

Verticordia darwinioides.	Rylstonea cernua.
Bracteoles large, enclosing the flower buds and long persistent, thin and scarious.	*Bracteoles* forming a hood over the corolla and folding over each other on the flower bud, and not falling off till the petals expand, scarious on the edges.
Calyx-tube cylindrical, 5-ribbed, smooth, about 3 lines long, the lobes deeply divided into 5 to 8 narrow filamentous segments, about twice as long as the petals.	*Calyx-tube* cylindrical, prominently 5-ribbed, 5 to 6 lines long, lobes simply divided into about 5 to 10 divisions, about twice as long as the petals, the outer lobes with accessory lobes.
Petals ovate, about 1 line long, entire.	*Petals* entire, imbricate, semicircular, contracted at the base.
Stamens mostly eaten off by insects, so that they could not be distinguished from staminodia.	*Stamens* 10, in a ring at the base of the petals; staminodia alternating with the stamens.
Anthers nearly globular as far as seen, but destroyed or damaged by insects.	*Anthers* globular, with two parallel cells, opening by minute pores, &c.
Style slender, much exserted, bearded towards the end.	*Style* well exserted, thick at the base and tapering upwards, bearded towards the end.
Ovules 2 only in the ovaria examined.	*Ovules* about 8, attached to a peltate placenta, &c.

It will be clearly seen from the above comparative extracts that the difference between the two plants lies chiefly in the size of unessential organs (except the difference in the number of ovules, which is probably due to the defective insect-eaten material we had to work upon), quite in keeping with the theory that our specimens were abnormal; all other differences are trifling or explainable. The flowers in the Dubbo specimens are scarcely nodding, owing to the short peduncles, but very conspicuously so in *Rylstonea* with the long slender peduncles.

We mentioned in our paper on *Verticordia darwinioides* that we hoped to procure better material next season, which might necessitate modifications in the above description; we did not succeed in that, but Mr. Baker had complete material at the time, and it is a regretable oversight on his part that he did not see that we were working on the same plant, and did not refer to the obvious affinity of his "supposed new genus" with our plant, in publishing his paper seven months later. Our plant is decidedly a connecting link between *Verticordia* and *Darwinia* (including *Homoranthus*), and having considered the matter, we would have ourselves proposed a new genus but for its affinity to the S. Australian *Verticordia Wilhelmi*. Mr. Baker's statement in his "Analysis of cognate genera," in which he characterises the genus *Verticordia* as: "Calyx hemispherical . . . flowers in corymbose heads," is scarcely correct. The calyx of *V. Wilhelmi* is not hemispherical, but cylindrical, exactly as in *V. darwinioides*, and the inflorescence of the genus is described by Bentham as: "Flowers usually pedicellate in the upper axils, forming often broad terminal leafy corymbs, or simple leafy spikes or racemes," is consequently extremely variable, and not a character on which the separation of a new genus could be based.

Angophora lanceolata, Cav., and A. intermedia, DC.

Narrabri (J. H. Maiden, November, 1899). The most north western locality recorded for both species.

UMBELLIFERÆ.

Actinotus Gibbonsii, F.v.M.

Narrabri (J. H. Maiden, November, 1899). A new locality for a rare plant.

Our common Flannel Flower, *A. Helianthi*, Labill., so well known in the Port Jackson district, occurs also at Narrabri. We have also found it considerably to the south-east, viz., Weddin Range and Bundah Range, Grenfell.

CAPRIFOLIACEÆ.

Sambucus xanthocarpa, F.v.M.

Weddin Forest Reserve (J. H. Maiden, November, 1899). The most western locality recorded.

COMPOSITÆ.

Soliva sessilis, Ruiz and Pav.

Naturalised in Moore Park, near Sydney (October, 1899).

Soliva anthemifolia, R.Br., though included in Mueller's "Census of Australian Plants," has been always suspected of having immigrated from South America. The discovery of a second South American species of the same range, from the Argentine to South Brazil, greatly strengthens this belief.

Helichrysum collinum, DC. (syn. with *H. oxylepis*, F.v.M.)

The type specimen of *H. oxylepis* from Moreton Bay has long linear leaves with revolute margins, and looks rather different from the broad-leaved woolly specimens of *H. collinum* from the Goulburn district or the Blue Mountains, but we find the shape and indumentum of the leaves, as well as the length of the involucral bracts characters so variable, that we fail to draw a line between the two species. Inspection of the abundant material in the Melbourne Herbarium confirms our opinion, and we now propose to reduce *H. oxylepis* to a variety of *H. collinum*. From the fact that in Mueller's original description of *H. oxylepis* in 1858 (*Fragm.* i. 35) he refers to its affinity to *H. scorpioides*, and does not mention the much more closely allied *H. collinum* (described so far back as 1837), we may conclude that the existence of *H. collinum* escaped his notice at the time, which oversight led to the mistake we have now corrected.

GOODENIACEÆ.

Goodenia glomerata, sp.nov.

A perennial with a tufted stem and several erect leafy woolly-hairy flowering stems. Leaves chiefly radical, spathulate-lanceo-

late, remotely and minutely denticulate or quite entire, narrowed in the lower half and slightly widened again at the sessile base, about $2\frac{1}{2}$ inches long, those of the stem distant, shorter, less narrowed in the lower part and more entire. Flowering stems about 10 inches high in the specimens seen, bearing the flowers at the top crowded together in a leafy head-like woolly-hairy cluster. Flowers sessile (7 in the single head available for examination), the calyces almost concealed in the long hairs of the rhachis, bracteoles and the base of the calyx-lobes. Calyx-tube very short, the lobes long, with linear-subulate points. Corolla yellow, hairy outside, about $\frac{3}{4}$ inch long, the two upper lobes separated much lower down. Capsule ovoid, about 3 lines long, densely woolly-hairy, the dissepiment reaching to above the middle. Seeds rather small and numerous, flat, with a thickened margin, the flat centre minutely pitted.

Braidwood (W. Bäuerlen, December, 1884; specimens kindly communicated by Mr. R. T. Baker).

The affinities of this species are with *G. geniculata*, R.Br., var. *lanata* (*G. lanata*, R.Br.), from which it is chiefly distinguished by its erect habit, head-like inflorescence and shape of the calyx lobes.

EPACRIDEÆ.

Epacris Calvertiana, F.v.M.

Jenolan Caves (W. F. Blakely, October, 1899).

Leaves from lanceolate to ovate-lanceolate, spreading.

A very different-looking plant from the ordinary form of *E. Calvertiana* with narrow-lanceolate erect leaves, but in other respects identical.

APOCYNEÆ.

Melodinus australis, sp.nov.

Described by the collector as "a shrub up to 4 feet," and called by him "Bell-bird bush," but from the evidence of the specimen sent, we are inclined to believe that under favourable conditions it is a trailing if not climbing shrub, quite glabrous. Leaves

shortly petiolate, linear-lanceolate, 3 to 3½ inches long, about 6 to 7 lines broad in the middle, tapering at both ends, shining above, paler underneath, with slightly recurved, somewhat undulate margins. Flowers generally 3 to 5 in loose axillary cymes much shorter than the leaves but much longer than the petioles, the pedicels 1 to 3 lines long, with 1 to several pairs of small bracts. Calyx without any glands, the segments obtuse, slightly ciliolate, above 1 line long, persistent under the fruit. Corolla-tube about 2 lines long, the lobes slightly longer, acute, the throat-scales usually irregularly united in a lobed or crested ring. Anthers inserted in the middle of the tube. Ovary glabrous. Fruit yellowish, on a short peduncle of about ½ inch, pear-shaped, attaining in our specimens 2¼ inches in length and about 1½ inches in diameter, with a hardened rind and numerous seeds embedded in pulp.

Between Unkya Creek and Allgomera, Yarrahappini Mountain, Kempsey district (G. R. Brown, January, 1897, and November, 1899).

BORAGINEÆ.

Ehretia membranifolia, R.Br.

Baradine (W. Forsyth, November, 1899). A new locality for a plant rather rare in New South Wales.

VERBENACEÆ.

Spartothamnus junceus, A. Cunn.

Scone (J. H. Maiden, August, 1899).

In this locality a shrub 6 feet high by 6 feet broad, the stem attaining 3 inches in diameter at the base, which is very much larger than hitherto recorded.

LAURINEÆ.

Endiandra Sieberi, Nees.

Shellharbour (E. Cheel, October, 1899). Most southern locality recorded.

THYMELEÆ.

Pimelea petræa, Meissn.

Warrumbungle Ranges (W. Forsyth, October, 1899).

The most northern and eastern locality recorded. It differs from a type specimen in the Sydney Herbarium, from Cudnaka, S. Australia, in the rather larger and less numerous flowers and less hairy leaves. In 1851 Mueller named his Cudnaka specimens *P. octophylla*, R.Br., var. *petræa*, but in the publication of his *Census* he kept the two species distinct. Our specimens from the Warrumbungle Ranges approach *P. octophylla*, and suggest that after all Mueller's original view may be the correct one.

EUPHORBIACEÆ.

Acalypha nemorum, F.v.M.

Road from Badgery's Crossing to Nowra (W. Forsyth & A. A. Hamilton, September 1899).

Previously recorded in New South Wales from the northern brush-forests, not further south than the Hastings River. The leaves of the southern specimens do not exceed $\frac{3}{4}$ of an inch in length, but, apart from the size of the leaves, we cannot find any essential difference between the northern and southern specimens. Female flowers and fruits not seen.

CYCADEÆ.

Macrozamia secunda, C. Moore.

Weddin Forest Reserve (J. H. Maiden, November, 1899).

This rather rare *Macrozamia* has been found hitherto only in the ranges near Dubbo and Mudgee, extending from Mudgee to Coonabarabran, where it gradually merges into *M. heteromera*.

The new locality extends its range considerably to the south.

Macrozamia flexuosa, C. Moore.

Scone to Stewart's Brook (J. H. Maiden, August, 1899), in stiff basaltic soil.

Previously only recorded from Limeburner's Creek on the lower Hunter River near Raymond Terrace.

ORCHIDEÆ.

Sarcochilus Fitzgeraldi, F.v.M., var. rubicentrum, var.nov.

Tweed River district (W. Forsyth, December, 1898).

Originally described by Fitzgerald as *S. rubicentrum* from plants procured from the Cairns district in Queensland; but not previously found in New South Wales, as far as we know.

Cymbidium canaliculatum, R.Br.

Narrabri (J. H. Maiden, November, 1899). The most western locality recorded.

AMARYLLIDEÆ.

Crinum pedunculatum, R.Br.

South shore of Jervis Bay, where it is known as "Rock Lily" (J. H. Maiden, July, 1899). Most southern locality recorded.

RESTIACEÆ.

Lepyrodia Muelleri, Benth.

Botany Swamps, La Perouse Road (J. H. Camfield, 12, 1897). New for the Port Jackson district. Previously (as regards New South Wales) recorded from the southern coast district.

GRAMINEÆ.

Chrysopogon Gryllus, Trin., var. spicigera, var.nov.

Narrabri (J. H. Maiden, November, 1899).

Spikelets generally in pairs along the ultimate branches of the panicle, rarely in threes. Awn of the second glume of the sessile spikelet generally very short.

Bentham adopted the name *spicigera* for a variety of *Chrysopogon parviflorus* with the spikelets mostly in pairs; we propose to apply the same name to the very similar variation just recorded in the closely allied *C. Gryllus*.

Following are additions to Hamilton's list of the Mt. Wilson flora (*antea*, p. 346). They were recently collected by Mr. Jesse and the Misses Gregson, and Mr. Maiden :—

STERCULIACEÆ.

Lasiopetalum ferrugineum, Sm., var. cordatum, Benth.

RHAMNEÆ.

Pomaderris phillyreoides, Sieb.

LEGUMINOSÆ.

Daviesia ulicina, Sm.
Pultenæa incurvata, A. Cunn.
,, echinula, Sieb.
,, plumosa, Sieb.

DROSERACEÆ.

Drosera peltata, Sm.

MYRTACEÆ.

Eucalyptus saligna, Sm., var. parviflora, D. & M.

SCROPHULARINEÆ.

Euphrasia Brownii, F.v.M.

ORCHIDEÆ.

Lyperanthus ellipticus, R.Br.
Bulbophyllum Elisæ, F.v.M.